ABSTRACT

A resistance welding electrode includes a first layer (2) of a metal-carbide film that is formed by attaching or carbonizing of an electrode material on a surface of the resistance welding electrode by applying a voltage between a powder molding obtained by molding a powder consisting mainly of a metal powder that is likely to be carbonized or a metal compound powder or a powder molding obtained by heating the powder molding in a working fluid and the resistance welding electrode, to generate a pulse-like discharge in; and a second layer (3) obtained by forming a film consisting mainly of any one of chrome, nickel, iron, tungsten, and molybdenum on the first layer.